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FEDERAL COMMUNICATIONS COMMISSION

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APR 21 1993

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

CC Docket No. 92-297

In the Matter of

Rulemaking to Amend Part 1 and Part 21
of the Commission's Rules to
Redesignate the 27.5 - 29.5 GHz Frequency
Band and to Establish Rules and Policies
for Local Multipoint Distribution Service

REPLY COMMENTS OF
HUGHES SPACE AND COMMUNICATIONS COMPANY AND
HUGHES NETWORK SYSTEMS, INC.

These are the reply comments of Hughes Space and Communications Company ("HSC"), a unit of Hughes Aircraft Company ("HAC") and Hughes Network Services, Inc. ("HNS"), a subsidiary of HAC, in the above captioned proceeding.

HSC and HNS have reviewed selected comments and replies filed in this proceeding and fully support the conclusions of NASA, Loral Qualcomm Satellite Services, Inc. and Norris Satellite Communications, Inc. on the issue of frequency sharing between LMDS and the fixed satellite service ("FSS") in the 27.5 - 29.5 GHz band. In short, the LMDS proposal would render the coprimary FSS uplink allocation in this band unusable and with it the matching FSS downlink band 17.7 - 19.7 GHz.^{1/}

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1. HSC and HNS recognize that these reply comments are filed out of time. However, after review of the record HSC and HNS have been able to identify a possible alternative frequency proposal which could help resolve the controversy. HSC and HNS therefore request leave to file this brief reply out of time and have served a copy on all parties who filed comments and replies in this proceeding.

As indicated in their initial comments, HSC and HNS have no opposition to the generic concept of an LMDS. HSC and HNS therefore have searched for alternative available frequencies for LMDS which would have the same general characteristics as the 28 GHz band but which would not present the sharing difficulties inherent in the Suite 12 proposal.

HSC and HNS believe that ample spectrum to accommodate an LMDS system is available in the neighborhood of 30 GHz and should be considered as an alternative to the 28 GHz band. HSC and HNS note that Suite 12 is already considering the use of digital techniques which would reduce the spectrum requirement for LMDS. We also note that digital microwave equipment is already available for use in the primary allocation to non-government fixed service in the frequency range 36 - 40 GHz. Moreover, the particular band 37 - 38.6 GHz is not allocated to any space service. By redesignating all or a part of this band for LMDS use, the intractable problems of sharing between LMDS and FSS (or other space services) would be avoided.

In summary, HSC and HNS believe that the following conclusions can be drawn from the comments filed in this proceeding:

1. Access to the entire uplink and corresponding downlink spectrum allocated in the Ka band for FSS use on a coprimary basis is essential to the future growth and development of the FSS.

2. FSS sharing with terrestrial microwave relay systems in the Ka downlink band (17.7 - 20.2 GHz) is feasible. Therefore, Suite 12's argument that sharing the uplink band (27.5 - 29.5 GHz) will not increase the difficulty of Ka band sharing because sharing is also impossible in the downlink band (17.7 - 19.7 GHz) is simply wrong. Suite 12's views to the contrary are based on its misconceptions about the difficulty of fixed service sharing with the FSS at C band.

3. The proposed redesignation of the 27.5 - 29.5 GHz band for LMDS would almost certainly preclude Ka band FSS entry precisely in the urban markets where FSS applications would likely find their greatest utility.

4. Such a reallocation would mean the loss of the nearly one-billion dollar tax payer investment in the development of ACTS technology specifically tailored for application at Ka band.

5. If LMDS systems were to employ the digital video compression and modulation technology now being put into use by all other video delivery media, a number of advantages to LMDS would accrue. The spectrum requirement could be reduced to 500 MHz or less with no increase in transmission power, no loss in signal quality, and with a probable gain in the TV-channel capacity.

6. As an alternative, the Commission should consider redesignating for LMDS all or a part of the non-government allocation to the fixed service in the band 37 - 38.6 GHz. The

feasibility of fixed service uses in this band is already well-established and transmitting and receiving equipment is readily available from both domestic and overseas sources.

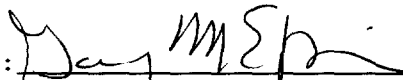
7. Unless LMDS proponents demonstrate conclusively that they can operate without imposing unacceptable constraints on the FSS in any part of the 27.5 - 29.5 GHz uplink allocation, that band should not be redesignated for LMDS as proposed in the Notice, and certainly not before the expiration of the 5-year period proposed by NASA.

* * *

HSC and HNS therefore continue to advocate that absent either a technical showing of sharing feasibility in the 28 GHz band, or an alternative frequency allocation as discussed above, the Commission should not allocate frequencies for LMDS.

Respectfully submitted,

LATHAM & WATKINS

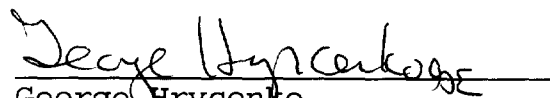
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CERTIFICATE OF SERVICE

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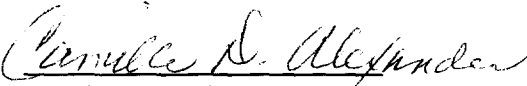
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